Metals Technologies Branch (DEM)

Provides technical assistance, design input, and resources for the fabrication and instrumentation of unique aerospace research hardware and test articles to support the GRC space and aeronautics projects and research activities utilizing micro, precision and high-speed machining; conventional, electron beam and laser welding; specialized plasma spray processes; dimensional inspection and quality assurance processes; rapid turnaround 3-D digital metal modeling using Laser Engineered Net Shaping (LENS); thermal processing; and high speed dynamic balancing capabilities. Instrumentation support includes: fabrication, packaging, assembling, and troubleshooting of instrumentation devices that measure fluid physics and solid mechanics properties including but not limited to thermocouples, strain gages, micro electro-mechanical systems (MEMS) devices and transducers. Provides surveillance of procured research hardware manufactured in the private sector. Supplies seasoned expert consultation and advanced machining technologies to develop, modify, and repair research hardware and supporting equipment in a concurrent engineering environment.